



**COMPLETE RESPONSES
TO ROUND 1
INTERROGATORIES
FROM PAPER
EXCELLENCE**

[2022 and 2023 Rate Application]



2022 AND 2023 RATE APPLICATION
INTERROGATORIES

Paper Excellence Q1

Can you explain how an increase in variable cost due to “the increased cost of fuel and purchased power” [page 1] justifies redesigning the rate so there is a higher recovery of fixed costs through an increased demand charge?

Response:

The increase in fuel cost is not the driving factor in justifying the rate redesign, but it is the driving factor for the required rate increase.

SaskPower's existing rate designs currently include an adjustment that transfers a portion of demand related costs to the energy charge. This adjustment results in energy charges being higher and demand charges being lower and do therefore not accurately reflect SaskPower's actual costs for the services it provides. As customer's consumption habits continue to evolve, it will become increasingly important that each component of the rates reflects the actual cost of that component rather than relying on a blended approach.

2022 AND 2023 RATE APPLICATION
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Paper Excellence Q2

Please add the sales volumes for each class to the tables on page 2 of the Application.

Response:

Please see the amended tables below that includes energy sales volumes for the 2023 & 2024 fiscal years:

**2022-23 revenue impacts
4.0% general rate increase with rebalancing maintenance
Effective September 1, 2022**

Class of Service	2022-23 Annual Revenue (Existing Rates) (\$ millions)	2022-23 Revenue Change (%)	2022-23 Annual Revenue Change (\$ millions)	2022-23 Number of Accounts	2022-23 Average Monthly Revenue (\$/Cust/month)	2022-23 Revenue Change (\$/Cust/month)	2022-23 Forecasted Sales (GWh)
Residential	579.5	4.2%	24.2	412,079	117	5	3,227.8
Farms	181.6	4.5%	8.3	58,077	261	12	1,341.8
Small Commercial	228.3	4.4%	9.9	56,384	337	15	1,537.0
General Service	257.0	3.9%	10.0	5,710	3,750	146	2,134.6
Total Commercial	485.3	4.1%	19.9	62,094	651	27	3,671.6
Power - Published Rates	559.1	4.1%	22.8	92	506,434	20,657	7,111.5
Power - Contract Rates	242.9	3.8%	9.3	14	1,446,060	55,597	3,171.9
Total Power	802.0	4.0%	32.1	106	630,536	25,271	10,283.4
Oilfields	416.0	3.4%	14.0	19,122	1,813	61	3,901.9
Streetlights	18.2	2.5%	0.5	3,144	481	12	29.8
Reseller	96.3	4.3%	4.2	3	2,674,931	116,319	1,171.3
Total (System)	2,579.0	4.0%	103.2	554,624	387	15	23,627.6

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2023-24 revenue impacts
4.0% general rate increase with rebalancing maintenance
Effective April 1, 2023

Class of Service	2023-24 Annual Revenue (Existing Rates) (\$ millions)	2023-24 Revenue Change (%)	2023-24 Annual Revenue Change (\$ millions)	2023-24 Number of Accounts	2023-24 Average Monthly Revenue (\$/Cust/month)	2023-24 Revenue Change (\$/Cust/month)	2023-24 Forecasted Sales (GWh)
Residential	607.8	4.2%	25.6	416,739	122	5	3,245.6
Farms	189.8	4.5%	8.6	57,951	273	12	1,341.5
Small Commercial	240.6	4.4%	10.5	56,904	352	15	1,551.9
General Service	269.3	3.9%	10.5	5,761	3,895	151	2,155.4
Total Commercial	509.8	4.1%	21.0	62,665	678	28	3,707.3
Power - Published Rates	571.9	4.1%	23.3	91	523,709	21,361	6,975.7
Power - Contract Rates	247.6	3.8%	9.4	14	1,473,726	56,168	3,132.1
Total Power	819.5	4.0%	32.8	105	650,378	26,002	10,107.8
Oilfields	438.9	3.4%	14.7	19,193	1,906	64	3,984.8
Streetlights	18.8	2.5%	0.5	3,153	498	12	26.2
Reseller	100.6	4.3%	4.4	3	2,795,081	121,544	1,174.3
Total (System)	2,685.3	4.0%	107.5	559,809	400	16	23,587.4

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Paper Excellence Q3

Please provide the GHG intensity for delivered energy in kg CO₂e/MWh for:

- a. 2005, the baseline year for the 2030 target referenced on page 4
- b. 2019-2021, by fiscal and calendar year
- c. The test period, by fiscal and calendar year

Response:

- a) The GHG intensity for delivered energy in the 2005 calendar year was 756 kg CO₂e/MWh.
- b) Please refer to the table below for the GHG intensity for delivered energy for the calendar years 2019 through 2021 and fiscal years 2019-20 through 2020-21.
- c) Please refer to the table below for the forecasted GHG intensity for delivered energy for the calendar years 2021 through 2023 and fiscal years 2021-22 through 2022-23.

Greenhouse Gas (GHG) Emissions Intensity

(in kg CO ₂ e/MWh)	Part (b)			Part (c)	
	Actual 2019	Actual 2020	Forecast ¹ 2021	Forecast 2022	Forecast 2023
GHG emissions intensity	691	571	•	496	477

(in kg CO ₂ e/MWh)	Part (b)		Part (c)	
	Actual 2019-20	Actual 2020-21	Forecast ¹ 2021-22	Forecast 2022-23
GHG emissions intensity	650	572	•	502

1. Results have not been provided for the calendar 2021 year and fiscal 2021-22 year as compilation and validation of data is still in progress.

Please note that quantification methodologies and emission factors used for GHG calculations may change on a calendar year basis as per regulatory requirements. As

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such, data adjusted for fiscal year reporting periods may not follow the same quantification methodology throughout the period.

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Paper Excellence Q4

Has SaskPower considered interruptible rate options as a mechanism for managing the challenge of dealing with increased penetration of non-firm renewable resources?

Response:

SaskPower is currently not considering further interruptible rates as a mechanism for addressing increased penetration of non-firm renewable generation resources. Currently, customers who have renewable self generation are permitted to stay on published rates.

Large industrial customers who are interested in load management opportunities should discuss their needs with SaskPower's Key and Major Accounts team.

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Paper Excellence Q5

Has SaskPower performed a cost benefit analysis of its natural gas hedging program? Does it participate in other hedging programs?

Response:

Yes, SaskPower evaluates the costs and benefits of its natural gas hedging program internally and at times, engages external consultants for a third-party review.

SaskPower does not participate in other hedging programs.

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Paper Excellence Q6

Please provide some comparative analysis for the natural gas price projections in the table at the bottom of page 7.

a. Please provide monthly actual averages for the price of gas for all available in the 2021/22 period.

Response:

The response contains commercially sensitive information and cannot be shared publicly but a full response was submitted to the Saskatchewan Rate Review Panel for their consideration during the review.

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Paper Excellence Q7

Please provide a table showing the rates for the power class, customer owned transmission, by year, from 2010 to present to reconcile with the data provided on page 13 of the Application.

Response:

Please see the tables below:

**SaskPower Historic and Proposed - Power Standard Rates
(2010 to 2023)**

Effective Date	Rate Components	E22	E23	E24	E25 *
2010	Basic Monthly Charge (\$/month)	\$5,234.00	\$6,000.00	\$6,441.00	\$6,750.00
	Energy Charge (\$/kWh)	\$0.05230	\$0.04708	\$0.04651	\$0.04651
	Demand Charge (\$/kV.A)	\$7.430	\$5.820	\$5.820	\$5.820
2013	Basic Monthly Charge (\$/month)	\$5,491.00	\$6,294.00	\$6,757.00	\$7,081.00
	Energy Charge (\$/kWh)	\$0.05486	\$0.04939	\$0.04879	\$0.04879
	Demand Charge (\$/kV.A)	\$7.794	\$6.100	\$6.100	\$6.100
2014	Basic Monthly Charge (\$/month)	\$5,491.00	\$6,294.00	\$6,757.00	\$7,081.00
	Energy Charge (\$/kWh)	\$0.05790	\$0.05216	\$0.05098	\$0.05098
	Demand Charge (\$/kV.A)	\$9.265	\$7.130	\$6.957	\$6.957
2015	Basic Monthly Charge (\$/month)	\$5,491.00	\$6,294.00	\$6,757.00	\$7,081.00
	Energy Charge (\$/kWh)	\$0.06124	\$0.05525	\$0.05421	\$0.05421
	Demand Charge (\$/kV.A)	\$9.676	\$7.458	\$7.350	\$7.350
2016	Basic Monthly Charge (\$/month)	\$5,770.96	\$6,614.90	\$7,101.51	\$7,442.02
	Energy Charge (\$/kWh)	\$0.06436	\$0.05807	\$0.05697	\$0.05697
	Demand Charge (\$/kV.A)	\$10.169	\$7.838	\$7.725	\$7.725
2017	Basic Monthly Charge (\$/month)	\$5,976.74	\$6,850.77	\$7,354.73	\$7,707.38
	Energy Charge (\$/kWh)	\$0.06665	\$0.06014	\$0.05900	\$0.05900
	Demand Charge (\$/kV.A)	\$10.532	\$8.117	\$8.000	\$8.000
2018	Basic Monthly Charge (\$/month)	\$6,188.90	\$7,093.95	\$7,615.80	\$7,980.97
	Energy Charge (\$/kWh)	\$0.06902	\$0.06227	\$0.06109	\$0.06109
	Demand Charge (\$/kV.A)	\$10.906	\$8.405	\$8.284	\$8.284
2022 (Proposed)	Basic Monthly Charge (\$/month)	\$6,791.23	\$7,682.75	\$8,275.25	
	Energy Charge (\$/kWh)	\$0.06332	\$0.06286	\$0.06115	
	Demand Charge (\$/kV.A)	\$13.429	\$11.020	\$9.738	
2023 (Proposed)	Basic Monthly Charge (\$/month)	\$6,759.21	\$7,845.52	\$8,403.75	
	Energy Charge (\$/kWh)	\$0.06253	\$0.06208	\$0.06025	
	Demand Charge (\$/kV.A)	\$17.998	\$14.632	\$11.586	

Notes:

* The E25 Rate was merged with rate E24 as of October 1, 2018

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**SaskPower Historic and Proposed - Power Time-of-Use Rates
(2010 to 2023)**

Effective Date	Rate Components		E82	E83	E84	E85 *
2010	Basic Monthly Charge (\$/month)		\$5,234.00	\$6,000.00	\$6,441.00	\$6,750.00
	Energy Charge (\$/kWh)	On-Peak	\$0.05803	\$0.05281	\$0.05224	\$0.05224
		Off-Peak	\$0.04803	\$0.42810	\$0.04224	\$0.04224
Demand Charge (\$/kV.A)		\$7.430	\$5.820	\$5.820	\$5.820	
2013	Basic Monthly Charge (\$/month)		\$5,491.00	\$6,294.00	\$6,757.00	\$7,081.00
	Energy Charge (\$/kWh)	On-Peak	\$0.06059	\$0.05512	\$0.05452	\$0.05452
		Off-Peak	\$0.05059	\$0.04512	\$0.04452	\$0.04452
Demand Charge (\$/kV.A)		\$7.794	\$6.100	\$6.100	\$6.100	
2014	Basic Monthly Charge (\$/month)		\$5,491.00	\$6,294.00	\$6,757.00	\$7,081.00
	Energy Charge (\$/kWh)	On-Peak	\$0.06363	\$0.05789	\$0.05671	\$0.05671
		Off-Peak	\$0.05363	\$0.04789	\$0.04671	\$0.04671
Demand Charge (\$/kV.A)		\$9.265	\$7.130	\$6.957	\$6.957	
2015	Basic Monthly Charge (\$/month)		\$5,491.00	\$6,294.00	\$6,757.00	\$7,081.00
	Energy Charge (\$/kWh)	On-Peak	\$0.06697	\$0.06098	\$0.05994	\$0.05994
		Off-Peak	\$0.05697	\$0.05098	\$0.04994	\$0.04994
Demand Charge (\$/kV.A)		\$9.676	\$7.458	\$7.350	\$7.350	
2016	Basic Monthly Charge (\$/month)		\$5,770.96	\$6,614.90	\$7,101.51	\$7,442.02
	Energy Charge (\$/kWh)	On-Peak	\$0.07009	\$0.06380	\$0.06270	\$0.06270
		Off-Peak	\$0.06009	\$0.05380	\$0.05270	\$0.05270
Demand Charge (\$/kV.A)		\$10.169	\$7.838	\$7.725	\$7.725	
2017	Basic Monthly Charge (\$/month)		\$5,976.74	\$6,850.77	\$7,354.73	\$7,707.38
	Energy Charge (\$/kWh)	On-Peak	\$0.07238	\$0.06587	\$0.06473	\$0.06473
		Off-Peak	\$0.06238	\$0.05587	\$0.05473	\$0.05473
Demand Charge (\$/kV.A)		\$10.532	\$8.117	\$8.000	\$8.000	
2018	Basic Monthly Charge (\$/month)		\$6,188.90	\$7,093.95	\$7,615.80	\$7,980.97
	Energy Charge (\$/kWh)	On-Peak	\$0.07475	\$0.06800	\$0.06682	\$0.06682
		Off-Peak	\$0.06475	\$0.05800	\$0.05682	\$0.05682
Demand Charge (\$/kV.A)		\$10.906	\$8.405	\$8.284	\$8.284	
2022 (Proposed)	Basic Monthly Charge (\$/month)		\$6,791.23	\$7,682.75	\$8,275.25	
	Energy Charge (\$/kWh)	On-Peak	\$0.06904	\$0.06858	\$0.06687	
		Off-Peak	\$0.05904	\$0.05858	\$0.05687	
Demand Charge (\$/kV.A)		\$13.429	\$11.020	\$9.738		
2023 (Proposed)	Basic Monthly Charge (\$/month)		\$6,759.21	\$7,845.52	\$8,403.75	
	Energy Charge (\$/kWh)	On-Peak	\$0.06825	\$0.06780	\$0.06597	
		Off-Peak	\$0.05825	\$0.05780	\$0.05597	
Demand Charge (\$/kV.A)		\$17.998	\$14.632	\$11.586		

Notes:

* The E85 Rate was merged with rate E84 as of October 1, 2018

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Paper Excellence Q8

Please explain the statement regarding future rate inflation due to “the pressures of the federal carbon tax” [page 16] when in other parts of the Application there are statements that the carbon tax is not included in this rate analysis.

Response:

The direct impact of the federal carbon tax on SaskPower's emissions is collected through a rate rider and SaskPower confirms that the rate rider is not impacted by this rate application.

However, there are indirect impacts related to the federal carbon tax that are not captured through the rate rider. SaskPower manages our system to minimize the total cost of our system, including the impact of the federal carbon tax. This affects decision-making related to the dispatch of generation options, imports and future supply options. While the use of generation sources related to the carbon tax are captured through the rate rider, increased costs related to using clean generation sources because the carbon tax make the clean generation source more cost-efficient is not captured through the rate rider.

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Paper Excellence Q9

Please explain why the aggregate Federal carbon charge (\$732 million) that is listed as an expense is less than the amount collected (\$708 million) in revenue in the table on page 17.

- a. Please provide a table that splits the annual Federal Carbon Charge operating costs by fuel source for each year.
- b. Please explain the notable dip in carbon charge for F2021/22.

Response:

The aggregate federal carbon charge expense of \$732 million is greater than the federal carbon charge collected of \$708 million in the table on page 17 due to the following:

- An aggregate \$9 million of other net recoveries, such as interest earned on the monies in the Federal Carbon Tax Variance Account (FCTVA) and federal carbon tax associated with exported generation. The federal carbon charge collected line item is solely for collections on Saskatchewan electricity sales, while other net recoveries are included in other income statement line items.
- A decrease of \$15 million in the expected FCTVA surplus balance arising from changes in generation volume and mix between the time the rate rider was developed versus the time that actual costs are incurred.

- a) Please refer to the table below for a breakdown of federal carbon tax expense by fuel source.

Federal carbon charge by fuel source

	Actual 2018-19	Actual 2019-20	Actual 2020-21	Forecast 2021-22	Business Plan 2022-23	Business Plan 2023-24
Federal carbon charge (gas)	\$ 8	\$ 15	\$ 7	\$ 23	\$ 18	\$ 32
Federal carbon charge (coal)	11	53	85	153	136	191
	\$ 19	\$ 68	\$ 92	\$ 176	\$ 154	\$ 223

- b) The increase in federal carbon charge expense in 2020-21 was limited to \$24 million primarily due to a lower fossil fuel generation, and a 149-GWh contraction in annual volume due to COVID-19.

Leveraging higher than normal water levels to increase hydro generation by 11%, combined with the first year of our 125-MW purchased power agreement with Manitoba Hydro, SaskPower was able to displace 1,034 GWh, or 11%, of coal-fired generation. Our company



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also scaled back generation from its legacy gas-fired plants to take advantage of lower emissions from the new Chinook Power Station.

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Paper Excellence Q10

Please provide a narrative to explain some of the ratepayer cost implications associated with the data in Exports table at the bottom of page 20 of the Application, namely:

- a. Why does the 2023-24 export volume increase 225% from the prior year?
- b. What is the basis for the 64% reduction in the \$/MWh price from the prior year?
- c. How is the carbon tax associated with electricity exports recovered?

Response:

- a. The addition of the 200MW Bekevar wind facility and the 350MW Great Plains natural gas power station pre-commissioned test energy in 2023-24 brings a surplus of generation online. The ~40MW PGRE natural gas facility also comes online partway through 2023-24 on October 30th of 2023. The 190MW Manitoba Hydro import is also flowing for a full year rather than 10 months of the year as was the case in 2022-23. In 2023-24, the PGPP program produces almost 2.5 times as much energy compared to 2022-23, going from 164 GWh to 394 GWh. No unit retirement occurs in 2023-24 to offset this generation growth, and load is forecasted to decrease by just over a percent from 2022-23. Therefore, these additional sources of generation result in a large increase in exports.
- b. The forecasted export market prices to the south and west decreased from 2022-23 to 2023-24. This coupled with the increase in supply and reduced load lower the economic price decision point to sell. This results in a significant change in the export \$/MWh price.
- c. Export decisions are based on achieving a margin between the export market price and SaskPower's cost of electrical energy to supply. SaskPower's cost is based on the marginal unit supplying the export. The marginal unit cost is based on all variable costs including carbon tax if applicable.

The calculation of the carbon charge expense for exports is: KWh exported per generating unit x the carbon charge expense for that unit. This item is an expense to SaskPower and is not recovered from SaskPower's Saskatchewan Sales customers.

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Paper Excellence Q11

Why are there no CO₂ sales in 2021-22 as shown in the table in Section 7.1.3?

Response:

The absence of CO₂ revenues in 2021-22 was a result of unforeseen outages caused by the back-to-back failures of major components in the plant. The components' failures were both exclusive events and unpredictable in nature. SaskPower was unable to meet its contractual obligations for CO₂ deliveries because of the outages, thus lowering net CO₂ revenues for the 2021-22 fiscal year.

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Paper Excellence Q12

Please restate the expense table on page 22 to show the natural gas pipeline and transportation costs paid to other utilities in the province as a separate line item.

Response:

The response contains confidential information and cannot be shared publicly but a full response was submitted to the Saskatchewan Rate Review Panel for their consideration during the review.

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Paper Excellence Q13

From the tables provided on page 22 of the Application, Imports have been consistently more expensive than other generation sources, around \$100/MWh. Please explain SaskPower's forecast 2021/22 import costs peaking at \$104.8/MWh followed by a decrease for 2022/23 & 2023/24 (to approx. \$84/MWh) and the large increase planned in imports given the increased average cost relative to other supply sources.

Response:

SaskPower's volume of imports is mostly driven by the volume of long-term import energy. In 2022-23 an increased import contract with Manitoba Hydro will begin.

Spot import prices vary significantly throughout a year. The import price varies based on market fundamentals and SaskPower's purpose for the import. Economic imports occur when import pricing is less than SaskPower marginal production cost. SaskPower executes economic imports to improve SaskPower's net cost of fuel and ultimately SaskPower's net income. Long term contracted imports with Manitoba are firm capacity and energy that has been purchased over the higher cost on peak hours. Shortfall imports occur when SaskPower's available generation is not sufficient to supply load and maintain system reserves. The import pricing in this situation is completely driven by the real time market prices which may be significantly higher than the annual average cost for imports on a per MWh basis. When SaskPower is short on supply there is a higher-than-normal coincidence to neighbouring markets being in a similar situation which leads to higher real time electricity prices. SaskPower through it's marketing arm, NorthPoint, executes the required shortfall imports from the least cost available markets.

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Paper Excellence Q14

Please provide some details to support the Levelized cost of electricity (LCOE) chart on page 23, specifically:

- a. What is the carbon tax rate used in the analysis?
- b. What are the heat rates (GJ_{gas}/MWh) assumed for the natural gas generation options?
- c. Does the LCOE for wind and solar include the cost for other resources to provide back up?
- d. What is the assumed capacity factor for solar?
- e. What is the estimated LCOE for SMR supply?

Response:

- a) The analysis looks at projected annual costs over the life of a project and takes into account various carbon tax rates and emissions thresholds based on the rates proposed by the Federal Government of Canada.
- b) The heat rate for combined cycle natural gas fired generation is approximately 7 GJ/MWh. The heat rate for simple cycle natural gas fired generation is approximately 10 GJ/MWh.
- c) The LCOE for wind and solar do not include costs related to back up.
- d) The assumed capacity factor for solar is approximately 25%.
- e) The LCOE for SMRs is under review and is not available for release at this time.

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Paper Excellence Q15

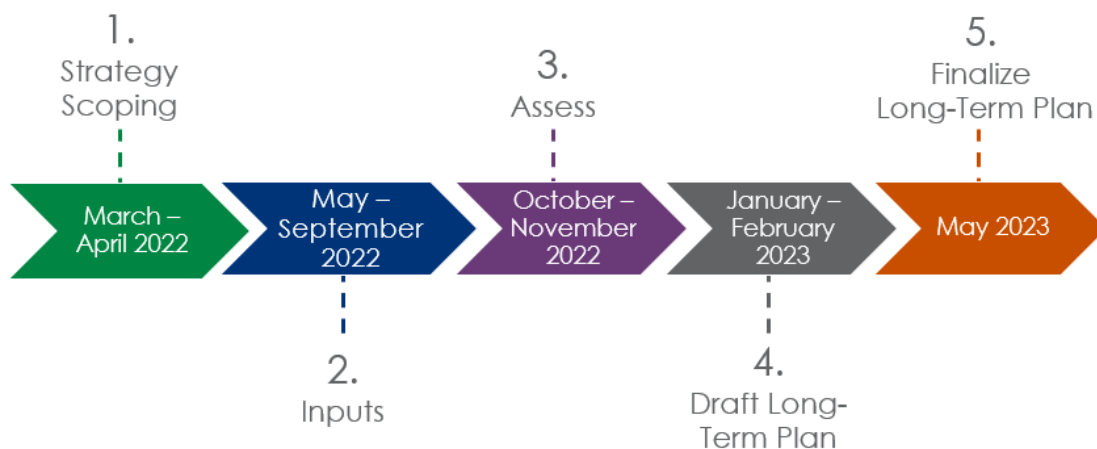
Please provide a timeline and an overview of the evaluation SaskPower is currently undertaking for future supply options to replace conventional coal (as noted on Application pages 23-24).

Response:

SaskPower performs reliability studies for assessing generation resource adequacy and prepares a ten-year supply plan annually which outlines its generation plan to meet the province's future resource needs. It considers retirement of existing units, planned and major overhauls to units, degradation of unit performance, escalating fuel prices, escalating capital costs for new units, unit operating costs and regulatory requirements. The amount of generation required is determined through reliability modeling. Once the generation requirement is assessed, various strategies, and supply alternatives that could be available by the required date, are taken into consideration to meet the capacity shortfall.

SaskPower also goes through a long-term planning approach on a regular basis. The plan must provide cost-effective, reliable power service that meets greenhouse gas emissions targets. SaskPower is set to cycle through the long-term plan development process again in 2022.

There are five stages to the process. As part of this process SaskPower will be incorporating input from its customers at each stage. [Help Plan Our Power Future \(saskpower.com\)](https://www.saskpower.com/help-plan-our-power-future)



In the short-term SaskPower is looking at supply options that are currently available like natural gas, CCS on coal, cogeneration, imports from outside of Saskatchewan (new transmission lines), hydro, biomass, flare gas, wind, storage and solar.

For the longer-term SaskPower is looking at emerging supply options like CCS on natural gas and nuclear power from small modular reactors (SMRs).

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Paper Excellence Q16

Please confirm what proportion of the taxes listed in Section 7.2.3.3 [page 28] are collected by the province.

Response:

The table below shows the corporate capital tax and the grants in lieu of tax amounts which are paid to the province. The remaining amounts relate to grants in lieu of property taxes which are paid to cities and rural municipalities.

<i>(in millions)</i>	Actual 2018-19	Actual 2019-20	Actual 2020-21	Forecast 2021-2	Business Plan 2022-23	Business Plan 2023-24
Taxes Total from table 7.2.3.3	\$ 74	\$ 77	\$ 79	\$ 82	\$ 82	\$ 85
Paid to the Province	(72)	(74)	(76)	(79)	(79)	(82)
	\$ 2	\$ 3	\$ 3	\$ 3	\$ 3	\$ 3

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Paper Excellence Q17

For Section 7.2.3.4 Other Expenses, please provide a table that details Other Expenses by sub-category including:
a. gains and losses on asset disposals,
b. retirements, and,
c. environmental and decommissioning expenses.

Response:

Other expenses

<i>(in millions)</i>	Actual 2018-19	Actual 2019-20	Actual 2020-21	Forecast 2021-22	Business Plan 2022-23	Business Plan 2023-24
Loss on asset retirements	\$ 16	\$ 20	\$ 23	\$ 23	\$ 20	\$ 24
Cost of asset disposals	8	11	9	9	1	9
Inventory variance adjustments	3	7	3	4	4	4
Environmental provisions	36	2	-	-	-	-
Other environmental costs	4	4	6	8	9	6
Settlement claims	-	-	(37)	-	-	-
Foreign exchange net losses	-	1	-	-	-	-
Gain on sale of equity accounted investments	-	(1)	-	-	-	-
Total other expenses	\$ 67	\$ 44	\$ 4	\$ 44	\$ 34	\$ 43

1. During 2020-21, the Corporation received a favourable ruling from an arbitral panel in relation to a contractual dispute comprised of a \$56 million cash award as well as \$14 million in forgiven payables. The portion of the award allocated to property, plant and equipment was \$32 million. The remaining \$38 million awarded was received in the settlement claims amount shown above offsetting other claims.

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Paper Excellence Q18

For any environmental and decommissioning expenses included in the test years, please provide detail on the approved Asset Retirement Obligation (ARO) that aligns with these costs. If not corresponding to an approved ARO, please explain why not.

Response:

The test years do not include expenses related to environmental or decommissioning related to the decommissioning of generation facilities. SaskPower has established provisions to decommission coal, natural gas, cogeneration and wind generation facilities. Costs to decommission are typically incurred when the last unit of the site is taken out of service and site decommissioning is undertaken. At that time the costs to decommission are charged against the established decommissioning provision.

Environmental expense itemized in question 17 are for monitoring and remediation activities related to current operations.

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Paper Excellence Q19

For planned coal decommissioning by 2030, please explain SaskPower's decommissioning plan for SaskPower's three coal-fired generation facilities, including timeline and forecast cost impacts.

Response:

All of SaskPower's coal facilities have an Industrial Waste Work (IWW) permit which requires a Decommissioning and Reclamation (D&R) plan that is approved by the Ministry of Environment. The D&R plans are reviewed and updated every 5 years, at a minimum, or sooner if warranted by major changes to the facility and operations.

These plans are currently at a high level and the process to refine and better define the work scope needed during the decommissioning and reclamation process has already begun. At present, a cost estimate has been generated to decommission and reclaim these facilities, but it is based on a number of assumptions and will continue to be refined as SaskPower get closer to the decommissioning dates. The environmental reclamation costs are anticipated to be one of the larger risks to the cost estimates for the decommissioning and reclamation plan. SaskPower will continue to monitor and manage site conditions and any potential environmentally adverse effects through work required under the existing IWW permit. As part of the ongoing planning, SaskPower continues to conduct site assessment activities to refine the remedial planning for the facility. It is anticipated to take up to 10 years to decommission and reclaim the site with monitoring continuing indefinitely after that.

To account for the future cost of decommissioning SaskPower has established financial provisions to decommission coal, natural gas, cogeneration and wind generation facilities. The fair value of the estimated decommissioning cost is recorded as a provision with an offsetting amount capitalized and included as part of property plant and equipment. The provisions are increased periodically for the passage of time by calculating interest expense. The offsetting capitalized asset retirement costs are depreciated over the estimated useful life of the related asset. The calculations of fair value are based on detailed studies that take into account various assumptions regarding the anticipated future cash flows including the method and timing of decommissioning and estimates of future inflation rates. Decommissioning provisions are periodically reviewed and any changes in the estimated timing and amount of future cash flows as well as changes in discount rate are recognized as an increase or decrease in the carrying amount of the obligation and related assets.

2022 AND 2023 RATE APPLICATION
INTERROGATORIES

Paper Excellence Q20

Please reconcile the proposed 39.9% increase in the Demand charge for E24/E84 customers with this statement on page 36 "SaskPower proposes to implement changes gradually over several rate applications to minimize the impact of the change on affected customers" (emphasis added).

- a. Will SaskPower be conducting separate rate redesign process?
- b. Is SaskPower contemplating any mitigation measures for impacted customers?
- c. What is the anticipated reduction in load because of the proposed rate design?

Response:

- a) The rate design process was completed and presented in the proposed rates for September 1, 2022, and April 1, 2023. These proposed rates are reflective of the effort to return to a conventional rate design. The fact that E24/E84 sees a 39% increase in the demand rate over the two years and is considered gradual illustrates the scope of the shift from current rates to their true conventional structure. As the rate designs approach the full conventional methodology, the energy components of the rates are expected to fall correspondingly as the demand charges increase, helping to reduce the overall impact. This is illustrated in the example table below:

Revenue Impact Analysis by Rate Component (E24)

	BMC	Energy	Demand	Total
Current Rate	\$ 91,390	\$ 7,625,865	\$ 2,157,154	\$ 9,874,408
2022-23 Proposed Rate	\$ 99,303	\$ 7,633,355	\$ 2,535,775	\$ 10,268,433
<i>% Increase from Current</i>	<i>8.7%</i>	<i>0.1%</i>	<i>17.6%</i>	<i>4.0%</i>
2023-24 Proposed Rate	\$ 100,845	\$ 7,521,008	\$ 3,016,994	\$ 10,638,847
<i>% Increase from 2022-23</i>	<i>1.6%</i>	<i>-1.5%</i>	<i>19.0%</i>	<i>3.6%</i>
Total % Increase from Current	10.3%	-1.4%	39.9%	7.7%

Note: Calculations based on 25MVA customer at 60% load factor and 95% power factor

- b) SaskPower plans to transition to a conventional rate design over several applications to mitigate the potential impacts to customers.
- c) SaskPower has not assumed any further reductions in load because of the proposed rate designs.

2022 AND 2023 RATE APPLICATION
INTERROGATORIES

Paper Excellence Q21

Please provide the methodology behind SaskPower's Energy Transition rate rebalancing between energy and demand charges as mentioned on page 36.

- a. Please include the planned gradual stepped rate changes SaskPower is planning to implement and the impacts to rate classes as a result, over a range of load factors (50%, 60%, 70%, 80%, 90%).
- b. Please explain all customer consultation SaskPower has undertaken in its development of this plan to date.

Response:

The rate design methodology that SaskPower is adopting is referred to as Cost Based Rate Design (CBRD), where each rate component will recover its appropriate amount of allocated revenue. Also known as a Conventional Rate Design, CBRD methodology is employed by most electrical utilities in North America.

SaskPower's existing rate design methodology results in some of the demand related costs being recovered through the energy charge. Known as the Bary Correction, this adjustment artificially distorts the true cost SaskPower incurs to serve its customers by making capacity (or demand) seem cheaper and energy seem more expensive, and the move to a CBRD is meant to correct this.

- a) SaskPower doesn't have a planned change schedule for transitioning in the CBRD methodology. Each year SaskPower rebuilds its cost-of-service models using the latest annual financial information and customer revenue and load data. As such, cost of service results will vary from year to year, which may potentially impact SaskPower's ability to transition to conventional rates under an established timeline. It is anticipated that it will take several applications to fully transition all customer classes to a conventional rate structure.

Below is an illustration of the impact on a theoretical 30 MVA, E24 customer at various load factors on a rate designed under our existing rate design methodology and the CBRD methodology before the rate increase:

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INTERROGATORIES

**The Impact of a Conventional Rate Design Compared to the Existing Rate Design Methodology
on a 30 MVA E24 Customer at Various Load Factors**

Load Factor (%)	Calculated Annual Revenue		Change in Revenue
	Existing Rate Design	Conventional Rate	
50%	\$ 10,207,425	\$ 10,644,013	\$ 436,589
60%	\$ 11,831,012	\$ 12,037,824	\$ 206,812
70%	\$ 13,454,598	\$ 13,431,635	\$ (22,964)
80%	\$ 15,078,185	\$ 14,825,445	\$ (252,740)
90%	\$ 16,701,772	\$ 16,219,256	\$ (482,516)

- b) During the public review of the Capacity Reservation Service (CRS) rates in 2020, one of the main recommendations from the third-party consultants was that SaskPower should transition to a conventional rate design ("Review of SaskPower Capacity Reservation Service (CRS) Rates", pg. 16) :

Recommendation #3: The Bary Correction should not be used in setting the CRS demand and energy charges and should be phased out of the rate design for all classes where it is currently used.

Since then, SaskPower has participated in several meetings over the last two years with many large industrial customers. These meetings included presentations outlining our proposed rate design change and the rationale for the change.

**2022 AND 2023 RATE APPLICATION
INTERROGATORIES**

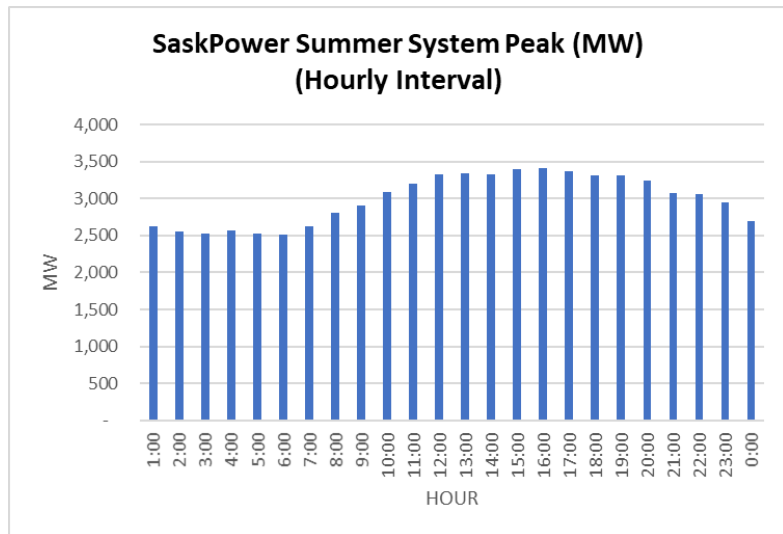
Paper Excellence Q22

Please describe the "typical" system demand over a peak winter and a peak summer day.

Response:

Below is a 24-hour interval system loadshape for the 2020 summer peak day:

Date	Hour Ending	Net Load
7/30/2020	1:00	2,619
7/30/2020	2:00	2,554
7/30/2020	3:00	2,520
7/30/2020	4:00	2,568
7/30/2020	5:00	2,532
7/30/2020	6:00	2,506
7/30/2020	7:00	2,629
7/30/2020	8:00	2,809
7/30/2020	9:00	2,909
7/30/2020	10:00	3,084
7/30/2020	11:00	3,202
7/30/2020	12:00	3,327
7/30/2020	13:00	3,335
7/30/2020	14:00	3,325
7/30/2020	15:00	3,391
7/30/2020	16:00	3,417
7/30/2020	17:00	3,367
7/30/2020	18:00	3,308
7/30/2020	19:00	3,306
7/30/2020	20:00	3,247
7/30/2020	21:00	3,078
7/30/2020	22:00	3,062
7/30/2020	23:00	2,943
7/31/2020	0:00	2,690

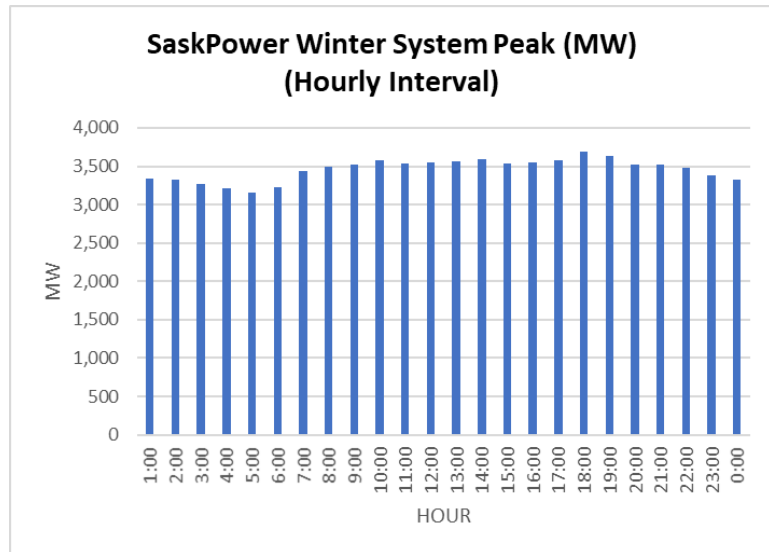


**Interval Peak is Gross load less station services

2022 AND 2023 RATE APPLICATION INTERROGATORIES

Below is a 24-hour interval system loadshape for the 2020 winter peak day:

Date	Hour Ending	Net Load
1/16/2020	1:00	3,345
1/16/2020	2:00	3,328
1/16/2020	3:00	3,262
1/16/2020	4:00	3,207
1/16/2020	5:00	3,153
1/16/2020	6:00	3,228
1/16/2020	7:00	3,436
1/16/2020	8:00	3,487
1/16/2020	9:00	3,519
1/16/2020	10:00	3,582
1/16/2020	11:00	3,530
1/16/2020	12:00	3,553
1/16/2020	13:00	3,570
1/16/2020	14:00	3,590
1/16/2020	15:00	3,536
1/16/2020	16:00	3,553
1/16/2020	17:00	3,583
1/16/2020	18:00	3,695
1/16/2020	19:00	3,628
1/16/2020	20:00	3,525
1/16/2020	21:00	3,527
1/16/2020	22:00	3,473
1/16/2020	23:00	3,378
1/17/2020	0:00	3,318



**Interval Peak is Gross load less station services

**2022 AND 2023 RATE APPLICATION
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Paper Excellence Q23

The table on page 131 of 852 of the Minimum Filing Requirements leads to several questions:

- a) Please provide an updated Table of Electricity Supply Additions including actuals back to 2018/19 including annual average energy (MWh) and efficiency percentages.
- b) Please provide an annual expense breakdown like the operating costs by major category provided in Section 7.2 of the Application for years 2018-19 to 2023-24 that breaks out the following:
 - i. details fuel and purchased power expenses separately in all years (i.e., SaskPower owned vs. IPP),
 - ii. details purchased power costs (including as they may impact other cost categories including operating, maintenance, and administration, and other) by Electricity Supply Addition for all existing IPPs/PPAs and those listed on pdf page 131 of 852.

Response:

a)

PROJECT NAME	NET CAPACITY (MW)	FUEL SOURCE	OWNERSHIP	COMMISSIONING DATE
Western Lily Wind Energy Facility	20	Wind	IPP	2018-19
Chinook Power Station	353	Natural gas	SaskPower	2019-20
Manitoba Hydro Import Agreement	100	Hydro	Manitoba Hydro	2020-21

PROJECT NAME	NET CAPACITY (MW)	FUEL SOURCE	OWNERSHIP	ESTIMATED COMMISSIONING DATE
Highfield Solar Energy Facility	10	Solar	IPP	2021-22
Golden South Wind Energy Facility	200	Wind	IPP	2021-22
Riverhurst Wind Energy Facility	10	Wind	IPP	2021-22
Blue Hill Wind Energy Facility	175	Wind	IPP	2021-22
MLTC Bioenergy Centre	8	Biomass	IPP	2021-22
Awasis Solar Energy Facility	10	Solar	IPP	2021-22
Pesâkâstêw Solar Energy Facility	10	Solar	IPP	2021-22
Manitoba Hydro Import Agreement	190	Hydro	Manitoba Hydro	2022-23
Foxtail Grove Solar Energy Facility	10	Solar	IPP	2023-24
Bekevar Wind Energy Facility	200	Wind	IPP	2023-24
Prairie Green Renewable Energy Facility	40	Natural gas	IPP	2023-24
Great Plains Power Station	360	Natural gas	SaskPower	2024-25

2022 AND 2023 RATE APPLICATION INTERROGATORIES

IPP/PPA - expenses

<i>(in millions)</i>	Actual 2018-19	Actual 2019-20	Actual 2020-21	Forecast 2021-22	Business Plan 2022-23	Business Plan 2023-24
Expense						
Fuel and purchased power	\$ 127	\$ 132	\$ 194	\$ 278	\$ 370	\$ 400
Federal carbon tax	2	6	(5)	1	1	2
Operating, maintenance & administration	13	11	10	11	11	11
Depreciation	47	48	48	48	48	48
Finance charges	152	150	149	137	138	131
Taxes	-	-	-	-	-	-
Other	-	-	-	-	-	-
	\$ 341	\$ 347	\$ 396	\$ 475	\$ 568	\$ 592

Most of SaskPower's renewable generation capacity is delivered through PPA's. From an accounting perspective, SaskPower is charged a price for electricity from a renewable PPA which is recorded as fuel & purchased power expense. The fuel expense for a PPA includes not just the cost of fuel itself, but also includes capital and OM&A costs incurred by the independent power producer in one all-in costs. Certain take-or-pay PPAs relating to Meridian Cogeneration Station, Spy Hill Generating Station and the North Battleford Generating Station gas-fired facilities which in management's judgement, give SaskPower the exclusive right to use specific production assets, meet the definition of a lease and therefore the are accounted for accordingly and payments are allocated to fuel, OM&A lease obligation and finance charges.

SaskPower-owned¹ - expenses

<i>(in millions)</i>	Actual 2018-19	Actual 2019-20	Actual 2020-21	Forecast 2021-22	Business Plan 2022-23	Business Plan 2023-24
Expense						
Fuel and purchased power	\$ 564	\$ 537	\$ 521	\$ 608	\$ 532	\$ 552
Federal carbon tax	17	62	97	175	153	221
Operating, maintenance & administration	251	265	250	253	259	253
Depreciation	262	260	269	277	258	256
Finance charges	125	141	139	129	116	118
Taxes	21	22	22	24	23	24
Other	7	8	8	9	6	8
	\$ 1,247	\$ 1,295	\$ 1,306	\$ 1,475	\$ 1,347	\$ 1,432

1. Cory Cogeneration Station has been included with SaskPower-owned generation in all years of the above table for comparative purposes; however, prior to July 11, 2019, this facility was classified as a Power Purchase Agreement (PPA) under the joint venture agreement between the Corporation's subsidiary, SaskPower International, and ATCO Power Canada Ltd. SaskPower International purchased the remaining ownership interest in the Cory Cogeneration Station Joint Venture on July 11, 2019, thereby dissolving the joint venture and terminating the PPA.

ii) This response contains commercially sensitive information. A full response has been provided to the Saskatchewan Rate Review Panel for their review.

2022 AND 2023 RATE APPLICATION INTERROGATORIES

Paper Excellence Q24

Please provide SaskPower's definition of rate shock from a ratepayer perspective and explain how SaskPower evaluates rate stability and fairness in its rate setting process – especially considering SaskPower's Section on Competitiveness does not include the proposed rate increases or rate rebalancing.

Response:

SaskPower does not have a formal definition of rate shock. We are mindful of the impact of rate increases on our customers and work to minimize the required increase. SaskPower evaluates rate stability and fairness in its rate setting process under the following criteria:

- 1) Rate Design Objectives:
 - a) Meeting Revenue Requirement:
 - Electrical rates are designed to provide sufficient revenue to cover both the utility's forecasted annual costs and return on rate base. To ensure this, rates are tested in SaskPower's revenue model to ensure the appropriate revenue is being collected overall and on a customer class basis.
 - b) Economic Efficiency:
 - Charging rates for electrical service that provide the appropriate price signals to customers that allow SaskPower to maintain a power system that continues to be efficient over time.
 - c) Conservation of Resources:
 - Provide appropriate price signals to consumers, so that they will utilize power in a reasonable manner.
 - d) Simplicity and Administrative Ease:
 - Rely on concepts of allocation that are logical, transparent to stakeholders and customers, and easily implementable.
 - e) Stability and Gradualism:
 - Employ cost allocations and rate-making standards that are steady over longer periods.
- 2) Minimize Cross-Subsidization:
 - a) SaskPower's long-term goal is to set all customer classes' revenue to revenue requirement ratios (R/RR) to a very narrow bandwidth of 0.98-1.02. External consultants have advised SaskPower that R/RR ratios close to 1.00 are deemed to be reasonable. Cost allocation studies of shared assets utilized by various customer groups represents the best and most current information available but is subject to fluctuations and uncertainty from year to year. A range of acceptable R/RR ratios of 0.95 to 1.05 is used in many jurisdictions as being acceptable for cost allocation studies and is considered to reflect that a

2022 AND 2023 RATE APPLICATION INTERROGATORIES

customer is paying their fair share of costs. As a result, a R/RR ratio that is slightly above or below 1.00 does not demonstrate that one customer class subsidizes or receives a subsidy from other customer classes if it falls within the acceptable range.

3) Utility Comparison:

- a) SaskPower participates in the annual Hydro-Québec survey that compares utilities' electrical tariffs across North America to confirm that our rates are competitive with other jurisdictions. A summary of the survey results is available in the rate application document (pg. 13)

4) Regulatory oversight:

- a) The Saskatchewan Rate Review Panel (SRRP) assures that SaskPower only includes costs and returns that are related to SaskPower's core business and that SaskPower applies cost of service and rate making methodologies that are reasonable, acceptable and align with industry standards.

2022 AND 2023 RATE APPLICATION
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Paper Excellence Q25

Regarding Rate rebalancing, Power-based on Cost of Service results from the R/RR Ratio tables provided on pages 34 and 35 of the Application, please confirm that"

- a) SaskPower is proposing Power – Published Rate increases higher than 4% to subsidize the Power – Contract Rate customers such that full cost recovery occurs in the Power rate class.
- b) If confirmed please explain how this is fair to the Power – Published rate class.
- c) If not confirmed, please explain why Power – Published rate customers are receiving above average rate increases September 1, 2022, and April 1, 2023, even though the R/RR ratio is at 100% with existing rates.

Response:

- a) and b)

As in previous applications, SaskPower's goal is to have all customer classes' R/RR ratios fall between a narrow range of 0.98-1.02. This is accomplished by setting residential and farm customers at 0.98, the resellers directly at 1.00, with the remaining classes set the same so the total system return equals 1.00. The rationale for this approach is detailed below:

- a. Meets/exceeds industry standards:
 - i. The current industry standard for the R/RR ratio range is 0.95-1.05. By setting our range between 0.98-1.02, SaskPower aims to have among the lowest levels of cross subsidization in Canada.
 - ii. Most Canadian utilities currently provide a subsidy to their residential customers.
- b. Prevents inadvertent cross-subsidization:
 - i. By setting residential & farms slightly below 1.00, they are less likely to inadvertently cross subsidize larger classes, which can occur if costs change dramatically, potentially shifting their R/RR ratio above 1.00.
- c. Stranded asset risk premium:
 - i. Residential and Farm customers pose a lower risk of stranded assets from tenancy changes compared to larger classes that may reside in remote areas and required substantial investment in infrastructure on SaskPower's behalf. As such, R/RR ratios are set slightly higher for these classes.
- d. No material levels of cross subsidization:
 - i. External consultants have advised SaskPower that R/RR ratios close to 1.00 are deemed to be reasonable. Cost allocation studies of shared assets utilized by various customer groups represents the best and most current information available but are subject to fluctuations and uncertainty from year to year. A range of acceptable R/RR ratios of 0.95 to 1.05 is used in

2022 AND 2023 RATE APPLICATION INTERROGATORIES

many jurisdictions as being acceptable for cost allocation studies and is considered to reflect that a customer is paying their fair share of costs. As a result, a R/RR ratio that is slightly above or below 1.00 does not demonstrate that one customer class subsidizes or receives a subsidy from other customer classes if it falls within the acceptable range. In conclusion, if the R/RR ratios are within the acceptable range, the results are deemed to be reasonable and there is no refutable evidence of cross-subsidization.

c)

SaskPower's long-term goal is to have all customer classes' R/RR ratios fall between 0.98-1.02. SaskPower proposes that Power – Published Rates customers receive an increase slightly higher than the system average to progress them to their targeted R/RR ratio of 1.02.

2022 AND 2023 RATE APPLICATION
INTERROGATORIES

Paper Excellence Q26

- a) Please advise as to the difference in the Energy Use assumption for rate code E84 (see pages 91 and 113 of the rate application).

Response:

Correction to Impact Tables – 2022-23 Rate Change Impacts – Rate E84

- The MWh/Year for this rate code was inadvertently linked to the on-peak total rather than the total energy. The MWh/Year should have been 576,899. The proposed rates and subsequent impacts for this table are unaffected by this correction.

Correction to Impact Tables – 2023-24 Rate Change Impacts – Rate E84

- The MWh/Year for the 2023-24 proposed rate is correct at 576,899. The table for 2023-24's impacts has been formatted to be consistent with 2022-23's.

The corrected tables are presented on the next page.

2022 AND 2023 RATE APPLICATION INTERROGATORIES

2022-23

Rate Change Impacts on E84 by Energy Intervals Power - Time of Use Customer Owned Transformation - 100kV & Above

Rate Breakdown	Existing	Proposed	
Energy Rate (cents/kW.h):	6.682	6.687	
Energy Off Peak Rate (cents/kW.h):	5.682	5.687	Based on Rate Class
Demand Rate (\$/kVA):	8.284	9.738	4.008%
Basic Charge (\$/month):	7,615.80	8,275.25	Based on 2020 Billing

Energy Intervals (KWh/month)	Interval ID	Number of Accounts		Energy Use		Average Monthly Change (\$)	% Increase		
		Number	(%)	(MWh/year)	(%)		Average	Low	High
>20000000	-	4	100.0	576,899	100.0	119,549.44	3.3	3.3	3.3
Total		1	100.0	576,899	100.0	119,549.44	3.3	3.3	3.3

Based on 2020 Billing. Rates developed based on forecasted customers and consumption.

2023-24

Rate Change Impacts on E84 by Energy Intervals Power - Time of Use Customer Owned Transformation - 100kV & Above

Rate Breakdown	Existing	Proposed	
Energy Rate (cents/kW.h):	6.687	6.597	
Energy Off Peak Rate (cents/kW.h):	5.687	5.597	Based on Rate Class
Demand Rate (\$/kVA):	9.738	11.586	3.998%
Basic Charge (\$/month):	8,275.25	8,403.75	Based on 2020 Billing

Energy Intervals (KWh/month)	Interval ID	Number of Accounts		Energy Use		Average Monthly Change (\$)	% Increase		
		Number	(%)	(MWh/year)	(%)		Average	Low	High
>20000000	-	4	100.0	576,899	100.0	105,056.59	2.8	2.8	2.8
Total		1	100.0	576,899	100.0	105,056.59	2.8	2.8	2.8

Based on 2020 Billing. Rates developed based on forecasted customers and consumption.